



# Keeping Up With Research **64**

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## **Production by Crossbred Ewes (Finn-Dorset x Rambouillet) in Northwestern Kansas**

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During the past decade, Finnsheep have been used extensively to increase fertility of offspring in crossbreeding trials by research institutions in most areas of the United States. Because geographical location (environment) plays a very important role in determining the performance of sheep, a small flock of Finn-cross ewes was evaluated at the Colby Experiment Station to determine production capabilities under northwestern Kansas conditions.

The project was initiated in 1973 when Finn x Dorset crossbred rams were bred to Rambouillet ewes to produce 1/4 Finn, 1/4 Dorset, 1/2 Rambouillet lambs. Fifty ewe lambs were selected from that lamb crop to be grown out and tested as ewes at the Colby Station.

In June of 1974, 48 ewe lambs were exposed to rams for the first time. They lambed that fall when they were about 1 year old. Suffolk sires were used throughout the 6-year trial, though a few ewes were exposed to Dorset rams. The ewes lambed in the fall each year of the trial. Most ewes lambed during November with only a few giving birth in December each year.

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### **AGRICULTURAL EXPERIMENT STATION**

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Table 1. Production performance of Finn-cross ewes for six lamb crops

	1974	1975	1976	1977	1978	1979	Six crops
No. exposed	48	48	43	40	33	28	240
No. lambed	43	35	40	39	30	24	211
% lambed	89.6	72.9	93.0	97.5	90.9	85.7	87.9
No. lambs	54	55	70	61	46	41	327
% lamb crop	112.5	114.6	162.8	152.5	139.4	146.4	136.3
Lambs/ewe lambing	1.26	1.57	1.75	1.56	1.53	1.71	1.55
Birth weight (lb)	9.5	9.0	9.5	10.2	10.5	10.0	9.8
No. lambs weaned*			59	55	45	35	194
% born weaned			84.3	90.2	97.8	85.4	89.0
Weaning weight (lb)			39.9	37.5	40.4	35.4	38.5

\* = Weaning at 50  $\pm$  3 days. Weaning data available for the last four lamb crops only.

Performance data are presented in Table 1. The first year 43 of 48 (89.6%) ewes lambed and produced a 112.5% lamb crop. All 48 ewes were still in the flock for the second lambing but only 35 ewes lambed (16.7% less than the first year). However, lambs born per ewe lambing increased from 1.26 to 1.57 for a 114.6% lamb crop. Five ewes were culled or lost and about half of the remaining 43 were subjected to hormone therapy before being bred for the third lamb crop (1976).

During the third lambing 93.0% of the ewes lambed and, reflecting the effects of hormone therapy, produced a 162.8% lamb crop, a 48.2% increase over the previous year. About half of the ewes were again subjected to hormone therapy before breeding for the fourth lamb crop (1977). The fourth lambing produced a 152.5% lamb crop as 97.5% of the ewes exposed lambed. The hormone therapy involved progesterone impregnated pessories being in place for 14 days prior to breeding. Ewes were injected with 500IU of pregnant mare serum when the pessories were removed.

No hormone treatment was used after the fourth lamb crop. For the fifth lambing (1978), 90.9% of the exposed ewes lambed and produced a 139.4% lamb crop; 85.7% of the exposed ewes lambed the sixth time during the fall of 1979 and produced a 146.4% lamb crop.

Combining the data from six lamb crops shows that 211 of 240 (87.9%) ewes exposed to breeding lambed and gave birth to 327 lambs for a 136.3%

lamb crop. Larger lamb crops have been produced by 1/4 Finn ewes in research flocks in other states, but generally under weather conditions much better suited for breeding sheep. At Colby, breeding began June 1 each year and usually continued for 90 days. Weather in northwest Kansas then is often uncomfortably hot for sheep.

The average birth weights of all lambs born ranged from 9.0 pounds in 1975 to 10.5 pounds in 1978, with a 9.8 average for six crops. Weaning data are not available for the first two lamb crops. Preweaning death losses ranged from 15.7% in 1976 to 2.2% in 1978. Most death losses occurred to twin- or triplet-born lambs. Weaning weights of all lambs averaged 39.5 pounds for the last four crops.

Data presented in Table 2 show the numbers and percentages of ewes that produced twins or triplets. Table 3 presents average birth weights for single, twin and triplet lambs and average weaning weights for those raised as singles or twins. No lamb was raised as a triplet.

At the close of 1979 the trial was terminated with

Table 2. Multiple births among Finn-cross ewes during six lamb crops

	1974	1975	1976	1977	1978	1979	Six crops
No. ewes lambed	43	3	40	39	30	24	211
No. twin births	11	16	22	22	16	13	100
% twin births	25.6	45.7	55.0	56.4	53.3	54.2	47.4
No. trip. births	0	2	4	0	0	2	8
% trip. births	0.0	5.7	10.0	0.0	0.0	8.3	3.8
% mult. births	25.6	51.4	65.0	56.4	53.3	62.5	51.2

Table 3. Birth weight and weaning weights of lambs born to Finn-cross ewes during six lamb crops.

	1974	1975	1976	1977	1978	1979	Six crops
B. W. singles (lb)	10.3	10.8	11.2	11.2	11.8	11.9	11.0
B. W. twins (lb)	8.4	8.3	9.6	9.8	10.0	9.8	9.4
B. W. triplets (lb)		7.9	7.6			7.9	7.7
W. W. singles (lb)			48.5	41.3	46.9	42.0	44.5
W. W. twins** (lb)			36.5	34.8	37.1	31.5	35.3

\*\* = No lambs were raised as triplets.

28 ewes remaining in the flock. Seven ewes died and 15 had been culled for such physical unsoundness as bad udders or for poor production. When the final 28 ewes were sold, four were sold as culls because of udder condition.

Considering lamb production from 1976 to 1979 provides some evaluation of productivity of this type of crossbred ewe during the mature years. Combining the data shows that 92.4% of the ewes exposed to rams lambed and produced an average lamb crop of 151.4%. The data included 2 years when about half of the ewes were hormone treated. Similarly managed straight-bred Rambouillet ewes, including some that were hormone treated, produced lamb crops of about 120% during the same span of time.

Finn-cross lambs are frequently criticized by packers and lamb buyers for producing low quality carcasses. However, when 1/4 Finn ewes are bred to meat type sires, such as Suffolk or Hampshire, the lambs produced are only 1/8 Finn. Such lambs are almost totally devoid of Finn characteristics, both on hoof and on the rail.